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John M. Epley

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ATER WYNNE LLP

1331 NW Lovejoy St. Suite 900

PORTLAND, OR 97209-2785

EXAMINER

HOEKSTRA, JEFFREY GERBEN

ART UNIT

PAPER NUMBER

3736

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/715,871	<b>Applicant(s)</b> EPLEY, JOHN M.	
	<b>Examiner</b> JEFFREY G. HOEKSTRA	<b>Art Unit</b> 3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 20-25 is/are pending in the application.
- 4a) Of the above claim(s) 9-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 20-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/17/2009</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/25/2009 has been entered.

### ***Notice of Amendment***

2. In response to the amendments filed on 09/25/2009, amended claim(s) 1, 7, and 20 is/are acknowledged. The current objections and rejections of the claim(s) 1-8 and 20-25 is/are *withdrawn*. The following new and/or reiterated ground(s) of rejection is/are set forth:

### ***Information Disclosure Statement***

3. The information disclosure statement(s) (IDS) submitted on 08/17/2009 is/are acknowledged. The submission is in compliance with the provisions of 37 CFR 1.97 and 1.98. Accordingly, the examiner is considering the information disclosure statement(s).

### ***Claim Rejections - 35 USC § 103***

Art Unit: 3736

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1, 2, 7, 8, and 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galiana et al. (US 5,942,954, hereinafter Galiana) in view of Shimada et al. (US 5,621,424, hereinafter Shimada).

7. For claim 1, Galiana discloses an apparatus (as best seen in Figure 4) for assisting in the computer-aided, substantially real-time diagnoses and treatments of vestibular disorders (column 1 lines 12-17, column 2 line 39 – column 3 line 32, column 3 line 61 – column 5 line 25, and column 8 line 12-32), comprising *inter alia*:

- a frame structure (housing element 52) (as best seen in Figure 4) (column 8 line 19-32) adapted for wearing on a subject's head in a condition of positional stability relative thereto (column 8 line 19-32), the frame structure comprising a length-adjustable band (adjustable head band elements 50) (as best seen in Figure 4)

Art Unit: 3736

- (column 8 line 19-32), an integrated and likewise positionally stable light-emitting structure (heads up display element 12) (as best seen in Figure 1) (column 4 lines 48-52) configured to illuminate at least one of the subject's eyes with light (column 4 lines 48-52), and a likewise positionally stable image capture device (video based eye tracker element 14) (as best seen in Figure 1) (column 4 lines 53-60) positioned to capture an image of the at least one of the subject's eyes (column 4 lines 53-60);
- at least a pair of vestibular-parameter data devices (the pair of Lorentz for actuator elements 51, the pair of headphone elements 53, and head tracker element 16) (as best seen in Figures 1 and 4) (column 4 lines 60-65 and column 8 line 19-32) selectively anchored/ anchorable to said frame structure in conditions thereon of relative positional stability both with respect to the frame structure and with respect to one another (as best seen in Figures 1 and 4) (column 4 lines 60-65 and column 8 line 19-32), each said device being adapted to engage in at least one of the activities including (a) delivering to (e.g. elements 51 perturb the head and elements 53 produce 3-D acoustic targets) (column 8 line 19-32), and (b) receiving from (e.g. element 16 tracks head motion) (column 4 lines 60-65), a subject's head vestibular-relevant parameter data (as best seen in Figures 1 and 4) (column 4 lines 60-65 and column 8 line 19-32); and
  - communication structure (processor element 18) (as best seen in Figure 1) (column 4 lines 3-17 and column 4 line 66 – column 5 line 25) operatively connected to said devices (as best seen in Figure 1) (column 4 line 66 – column 5 line 25), and operatively associable with appropriate computing structure (the analysis software

running on processor element 18) (column 4 line 66 – column 5 line 25), adapted to accommodate at least one of the tasks including (a) communicating the vestibular-relevant parameter data to (column 4 line 66 – column 5 line 25), and (b) communicating the vestibular-relevant parameter data from (column 4 line 66 – column 5 line 25), said devices relative to such an associated computing structure (column 4 line 66 – column 5 line 25).

8. For claim 1, Galiana discloses the claimed invention, as set forth and cited above, except for expressly disclosing the frame structure comprising an integrated and likewise positionally stable eye-enclosing goggle-like portion configured to substantially obstruct the subject's normal visual range and to exclude ambient light therefrom, the eye-enclosing portion further including fixedly anchored thereto each of an infrared light-emitting structure configured to illuminate at least one of the subject's eyes with infrared light and a likewise positionally stable image capture device positioned to capture an image of the at least one of the subject's eyes.

9. For claim 1, Shimada teaches an apparatus (as best seen in Figures 5A-6A), comprising *inter alia*: a frame structure (display apparatus element 1) (column 3 lines 42-56) adapted for wearing on a subject's head in a condition of positional stability relative thereto (as best seen in Figure 4) (column 3 lines 42-56) comprising an integrated and likewise positionally stable eye-enclosing goggle-like portion (display apparatus element 1 comprising in part cover element 3 and electronic shutter element 13) (column 4 lines 1-5) configured to substantially obstruct the subject's normal visual range and to exclude ambient light therefrom (column 3 lines 42-47 and column 4 lines

Art Unit: 3736

1-5, lines 27-32, and lines 58-61), the eye-enclosing portion further including fixedly anchored thereto each of an infrared light-emitting structure (infrared light emitting diode elements 28) (as best seen in Figure 5A and 6A) (column 6 lines 14-38) configured to illuminate at least one of the subject's eyes with infrared light (as best seen in Figure 5A and 6A) (column 6 lines 14-38) and a likewise positionally stable image capture device (infrared light detecting elements 29) (as best seen in Figure 5A and 6A) (column 6 lines 14-38) positioned to capture an image of the at least one of the subject's eyes (as best seen in Figure 5A and 6A) (column 6 lines 14-38).

10. Thus for claim 1, all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. All of the component parts are known in Galiana and Shimada. The only difference is the combination of the component parts into a single device. Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the components as taught by Galiana with the components as taught by Shimada to achieve the predictable results of increasing the efficacy of a device to assist in computer-aided, substantially real-time diagnoses and treatments of vestibular disorders by additionally providing a light blocking goggle portion having eye monitoring emitters and detectors on a frame in order to gather and analyze more data with respect to the vestibular disorder.

Art Unit: 3736

11. For claim 2, Galiana discloses an apparatus, wherein said devices are selected the group consisting of a linear accelerometer (column 4 lines 60-65), an angular accelerometer (column 4 lines 60-65), a sound deliverer (column 8 line 19-32), an air-pressure modifier directly coupleable to the ear (column 8 line 19-32), fluid-flow structure directly coupleable to the ear (column 8 line 19-32), and a vibration-generating structure (column 8 line 19-32).

12. For claim 7, Galiana discloses an apparatus (as best seen in Figure 4) for assisting in the computer-aided, substantially real-time diagnoses and treatments of vestibular disorders (column 1 lines 12-17, column 2 line 39 – column 3 line 32, column 3 line 61 – column 5 line 25, and column 8 line 12-32), comprising *inter alia*:

- a frame structure (housing element 52) (as best seen in Figure 4) (column 8 line 19-32) wearably securable to a subject's head in a manner causing the frame structure to function as a non-relative-motion unit with respect to the subject's head (as best seen in Figure 4) (column 8 line 19-32), the frame structure comprising two length-adjustable bands (adjustable head band elements 50) (as best seen in Figure 4) (column 8 line 19-32) coupled with the frame structure (as best seen in Figure 4) (column 8 line 19-32) and configured to encircle at least a portion of the subject's head (as best seen in Figure 4) (column 8 line 19-32) and secure the frame structure thereto (as best seen in Figure 4) (column 8 line 19-32);
- a light emitting means (heads up display element 12) (as best seen in Figure 1) (column 4 lines 48-52) fixedly anchored to the frame structure (column 3 lines 10-32



Art Unit: 3736

and column 4 lines 3-5 and 48-52) and configured to direct light inwardly toward the at least one of the subject's eyes (column 4 lines 48-52);

- an integrated subject-eye-movement monitoring camera (video based eye tracker element 14) (as best seen in Figure 1) (column 4 lines 53-60) fixedly anchored to the frame structure (column 3 lines 10-32 and column 4 lines 3-5 and 53-60) and configured to capture an image of at least one of the subject's eyes (column 4 lines 53-60);
- plural, different, data-parameter devices (the pair of Lorentz for actuator elements 51, the pair of headphone elements 53, and head tracker element 16) (as best seen in Figures 1 and 4) (column 4 lines 60-65 and column 8 line 19-32), each selectively anchored/anchorable to said frame structure in a manner causing it to function as a unit with the frame structure (as best seen in Figures 1 and 4) (column 3 lines 10-32, column 4 lines 3-5, column 4 lines 60-65, and column 8 line 19-32), and further to function without any relative motion permitted between it and another so anchored/anchorable device (as best seen in Figures 1 and 4) (column 3 lines 10-32, column 4 lines 3-5, column 4 lines 60-65, and column 8 line 19-32), with each said device being adapted to engage in at least one of the activities including (a) delivering to (e.g. elements 51 perturb the head and elements 53 produce 3-D acoustic targets) (column 8 line 19-32), and (b) receiving from (e.g. element 16 tracks head motion) (column 4 lines 60-65), a subject's head, different parameter vestibular data which are relevant to diagnosis and treatment of a vestibular disorder (as best seen in Figures 1 and 4) (column 4 lines 60-65 and column 8 line 19-32); and

Art Unit: 3736

- a computing structure (processor element 18) (as best seen in Figure 1) (column 4 lines 3-17 and column 4 line 66 – column 5 line 25) operatively connected to all so-anchored ones of said devices (as best seen in Figure 1) (column 4 line 66 – column 5 line 25), adapted to share in the delivery and reception of such different-parameter data with those devices (as best seen in Figure 1) (column 4 line 66 – column 5 line 25), said computing structure including algorithm structure (the algorithms in the analysis software running on processor element 18) (column 4 lines 3-17 and column 4 line 66 – column 5 line 25) which equips the computing structure to perform substantially real-time operations relative to such delivered and received, different-parameter data, including performing the operation of vestibular-disorder correlation and analysis of received data (column 4 lines 3-17 and column 4 line 66 – column 5 line 25).

13. For claim 7, Galiana discloses the claimed invention, as set forth and cited above, except for expressly disclosing the frame structure comprising an integrated and likewise non-relative motion, substantially vision-obstructing portion; the band, the light emitting means, and the camera are coupled with or anchored to the goggle-like portion; and the light emitting means directs infrared light.

14. For claim 7, Shimada teaches an apparatus (as best seen in Figures 5A-6A), comprising *inter alia*: a frame structure (display apparatus element 1) (column 3 lines 42-56) comprising an integrated and likewise non-relative motion, substantially vision-obstructing portion (display apparatus element 1 comprising in part cover element 3 and electronic shutter element 13) (column 3 lines 42-47 and column 4 lines 1-5, lines 27-

Art Unit: 3736

32, and lines 58-61); a band (the rearward band portion of display apparatus element 1) (as best seen in Figures 2 and 4), a light emitting means (infrared light emitting diode elements 28) (as best seen in Figure 5A and 6A) (column 6 lines 14-38), and a camera (infrared light detecting elements 29) (as best seen in Figure 5A and 6A) (column 6 lines 14-38) are coupled with and/or anchored to the goggle-like portion (as best seen in Figures 4 and 5A-6A); and the light emitting means directs infrared light (as best seen in Figure 5A and 6A) (column 6 lines 14-38).

15. Thus for claim 7, all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. All of the component parts are known in Galiana and Shimada. The only difference is the combination of the component parts into a single device. Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the components as taught by Galiana with the components as taught by Shimada to achieve the predictable results of increasing the efficacy of a device to assist in computer-aided, substantially real-time diagnoses and treatments of vestibular disorders by additionally providing a light blocking goggle portion having eye monitoring infrared emitters and detectors on a frame in order to gather and analyze more data with respect to the vestibular disorder.

16. For claim 8, Galiana discloses an apparatus, wherein said devices are selected the group consisting of a linear accelerometer (column 4 lines 60-65), an angular

Art Unit: 3736

accelerometer (column 4 lines 60-65), a sound deliverer (column 8 line 19-32), an air-pressure modifier directly coupleable to the ear (column 8 line 19-32), fluid-flow structure directly coupleable to the ear (column 8 line 19-32), and a vibration-generating structure (column 8 line 19-32).

17. For claim 20, Galiana discloses an apparatus (as best seen in Figure 4) a system employable by an attendant user for diagnosing and treating a subject's vestibular disorder (column 1 lines 12-17, column 2 line 39 – column 3 line 32, column 3 line 61 – column 5 line 25, and column 8 line 12-32), said system, in operative condition, comprising *inter alia*:

- headgear (headgear element 49) (as best seen in Figure 4) (column 8 line 19-32) worn by a subject (as best seen in Figure 4) (column 8 line 19-32), comprising *inter alia*:
  - a frame structure (housing element 52) (as best seen in Figure 4) (column 8 line 19-32) seated with positional stability on and relative to the subject's head (column 8 line 19-32), and
  - plural vestibular-disorder-relevant information sensors and stimuli deliverers (heads up display element 12, video based eye tracker element 14, the pair of headphone elements 53, and head tracker element 16) (as best seen in Figures 1 and 4) (column 4 lines 48-65 and column 8 line 19-32) anchored with positional stability on said frame structure (as best seen in Figures 1 and 4) (column 4 lines 60-65 and column 8 line 19-32), wherein at least one of the

- anchored sensors is an image capture device (video based eye tracker element 14) (as best seen in Figure 1) (column 4 lines 53-60) configured thereon to capture an image of the at least one of the subject's eyes (column 4 lines 53-60);
- a computer (processor element 18) (as best seen in Figure 1) (column 4 lines 3-17 and column 4 line 66 – column 5 line 25) armed with vestibular-disorder, expert-trained algorithm structure (the algorithms in the analysis software running on processor element 18) (column 4 lines 3-17 and column 4 line 66 – column 5 line 25); and
  - data-flow and control interposition structure (the electrical connections between at least the headgear components and the processor) (as best seen in Figure 1), including feedback structure (as best seen in Figures 2A and 2B) (column 4 lines 3-17, column 4 line 66 – column 5 line 25, column 6 lines 5-35, and column 8 lines 12-18), operatively interposed between said headgear, said computer, the subject, and the attending user (column 4 lines 3-17 and column 4 line 66 – column 5 line 25), operable, in relation to the expert-trained capabilities of said algorithm structure, (a) to collect data from (column 4 lines 3-17 and column 4 line 66 – column 5 line 25), and to effect the delivery of stimuli to (column 4 lines 3-17 and column 4 line 66 – column 5 line 25), the subject via said headgear (column 4 lines 3-17 and column 4 line 66 – column 5 line 25), and further (b) to effect and control the engagement of selected diagnosing and treating activities with respect to the subject (column 4 lines 3-17 and column 4 line 66 – column 5 line 25), including initiating such effecting and

controlling as a feedback response to such collected data (column 4 lines 3-17 and column 4 line 66 – column 5 line 25).

18. For claim 20, Galiana discloses the claimed invention, as set forth and cited above, except for expressly disclosing the headgear comprises a positionally stable goggle-like, eye-enclosing, portion integral with the frame structure and configured to substantially limit the subject's visual input by at least excluding ambient light.

19. For claim 20, Shimada teaches an apparatus (as best seen in Figures 5A-6A), comprising *inter alia*: a headgear (display apparatus element 1) (column 3 lines 42-56) worn by a subject (as best seen in Figure 4) (column 3 lines 42-56) comprising a positionally stable goggle-like, eye-enclosing, portion (display apparatus element 1 comprising in part cover element 3 and electronic shutter element 13) (column 4 lines 1-5) integral with a frame structure (as best seen in Figures 5A-6A) and configured to substantially limit the subject's visual input by at least excluding ambient light (column 3 lines 42-47 and column 4 lines 1-5, lines 27-32, and lines 58-61).

20. Thus for claim 20, all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. All of the component parts are known in Galiana and Shimada. The only difference is the combination of the component parts into a single device. Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the components as taught by Galiana with the components as taught by Shimada to

achieve the predictable results of increasing the efficacy of a device to assist in computer-aided, substantially real-time diagnoses and treatments of vestibular disorders by additionally providing a light blocking goggle portion on a frame in order to block external stimuli to eliminate variables in diagnosing the vestibular disorder.

21. For claim 21, Galiana discloses a system, wherein the feedback response is one which furnishes diagnostic and/or treatment guidance to the attending user (as best seen in Figures 2A and 2B) (column 4 lines 3-17, column 4 line 66 – column 5 line 25, column 6 lines 5-35, and column 8 lines 12-18).

22. For claim 22, Galiana discloses a system, wherein the feedback response functions to effect changes in stimuli delivered to the subject (as best seen in Figures 2A and 2B) (column 4 lines 3-17, column 4 line 66 – column 5 line 25, column 6 lines 5-35, and column 8 lines 12-18).

23. For claim 23, Galiana discloses a system, wherein the feedback response functions to effect changes in fluid-flow delivery (column 8 lines 28-32) as a stimulus to the subject (as best seen in Figures 2A and 2B) (column 4 lines 3-17, column 4 line 66 – column 5 line 25, column 6 lines 5-35, and column 8 lines 12-18).

24. For claim 24, Galiana discloses a system, further including a computer-operable subject repositioning mechanism (the pair of Lorentz for actuator elements 51) (column 4 lines 37-47 and column 8 line 19-32) operatively coupled with the computer via the data-flow and control interposition structure (as best seen in Figures 1 and 4) (column 4 lines 3-17 and column 4 line 66 – column 5 line 25).

25. For claim 25, Galiana discloses a system, wherein the expert-trained algorithm structure, when executed by the computer specially armed therewith, is configured to present to the attendant user either or both of visual and audible subject repositioning parameter data instructing the attendant user regarding manual repositioning of the subject for affecting either or both of diagnosis and treatment of the subject (column 4 lines 3-17, column 4 line 66 – column 5 line 25, column 6 lines 5-35, and column 8 lines 12-18), wherein said presenting comprises either or both of causing the operative components of a sound generating device to produce an audibly-cognizable representation of said instruction (column 4 lines 3-17, column 4 line 66 – column 5 line 25, column 6 lines 5-35, and column 8 lines 12-18) and causing the operative components of a display device to produce a visually-cognizable depiction of said instruction (column 4 lines 3-17, column 4 line 66 – column 5 line 25, column 6 lines 5-35, and column 8 lines 12-18).

26. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galiana et al. (US 5,942,954, hereinafter Galiana) in view of Shimada et al. (US 5,621,424, hereinafter Shimada), as applied to claims 1, 2, 7, 8, and 20-25 above, and in further view of Arenburg (US 5,476,446).

27. For claims 3-6, Galiana in view of Shimada discloses the claimed invention, as set forth and cited above, except for expressly disclosing, for claims 3-5, the sound deliverer and the air-pressure modifier share a common structure comprising an elongate tubular body structure having a delivery end removably insertable into the ear,



Art Unit: 3736

and an oblong, compliant, tubular and tapered insertion bulb fluid-sealingly joined to said delivery end, and possessing an outside surface which is directly and fluid-sealingly engageable with ear tissue with said body structure's said delivery end inserted into the ear, or, for claim 6, the fluid-flow structure comprises an elongate, malleable, tubular fluid-flow body structure having an end configured to pierce the subject's tympanic membrane, and a digital manipulation, maneuvering-assist enlargement joined to said body at a location spaced from said end.

28. For claims 3-6, Arenburg teaches an apparatus, comprising *inter alia*: for claims 3-5, a sound deliverer (200) (as best seen in Figures 6-10 and 11) (column 1 lines 8-18) and an air-pressure modifier (200) (as best seen in Figures 6-10 and 11) (column 1 lines 8-18) share a common structure (200) (as best seen in Figures 6-10 and 11) comprising an elongate tubular body structure (200) (as best seen in Figures 6-10 and 11) having a delivery end (272) removably insertable into the ear (as best seen in Figure 11), and an oblong, compliant, tubular and tapered insertion bulb (220) fluid-sealingly joined to said delivery end (as best seen in Figure 11), and possessing an outside surface (as best seen in Figure 11) which is directly and fluid-sealingly engageable with ear tissue with said body structure's said delivery end inserted into the ear (column 25 line 58 – column 26 line 39), and, for claim 6, a fluid-flow structure (200) (as best seen in Figures 6-10 and 11) (column 1 lines 8-18) comprises an elongate, malleable, tubular fluid-flow body structure (200) (as best seen in Figures 6-10 and 11) having an end (272) (as best seen in Figures 10-11) configured to pierce the subject's tympanic membrane (column 25 lines 28-57) , and a digital manipulation, maneuvering-

assist enlargement (290) (as best seen in Figure 7 and 11) joined to said body at a location spaced from said end (as best seen in Figure 7 and 11).

29. Thus for claims 3-6, all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. All of the component parts are known in Galiana in view of Shimada and Arenburg. The only difference is the combination of the component parts into a single device. Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the components as taught by Galiana in view of Shimada with the components as taught by Arenburg to achieve the predictable results of increasing the efficacy of a device to assist in computer-aided, substantially real-time diagnoses and treatments of vestibular disorders by additionally providing a vestibular pressure altering structure in order to provide therapy for the vestibular disorder.

### ***Response to Arguments***

30. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

31. Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view

Art Unit: 3736

of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY G. HOEKSTRA whose telephone number is (571)272-7232. The examiner can normally be reached on Monday through Friday 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571)272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jeffrey G Hoekstra/  
Examiner, Art Unit 3736